AMERICAN INTELLIGENCE.

ORIGINAL COMMUNICATIONS.

Operation for Strangulated Hernia; treated by the Catacleitic Method; Cure. By MIDDLETON MICHEL, M. D., Professor of Anatomy and Physiology in the Medical College of the State of South Carolina.

Strangulated hernia, however frequent an accident even in private practice, is the surgeon's constant solicitude as to its successful termination, whether by the taxis or by the knife. No two cases are so identical but that the value of the varied methods of reduction may again be tested, or the complications during a surgical operation be once more examined.

The dangers through which a portion of intestine may have passed during fifty-two hours of strangulation, will always prove a study to the pathologist; and so long as an exaggerated alarm possesses the mind concerning interference with the peritoneal sac, statistics may be required.

The little boy whose case I relate is only fourteen years old. He has long suffered from a right inguinal hernia, not congenital, as the testicle is easily discerned outside of the sac. For seven months a truss was worn, and then abandoned, as he discovered that he could readily reduce the hernia whenever it descended; but on the morning of the 29th of April, while romping at school, it became strangulated, and was attended immediately with symptoms so violent that the family physician was summoned. Chloroform was administered, and the taxis resorted to several times during the day, and through the night injections of tobacco and salt were used without reduction of the enterocele. Vomiting, which had existed from the commencement, continued until the operation was performed. The bowels were moved once during the night.

I saw the case in consultation at 5 o'clock in the afternoon of the 30th. The tumour had become scrotal, and was tense and painful, with some increase of temperature, but no change of colour in the parts. The constriction at the external ring was so well marked that little hope was entertained that the taxis would offer any relief. There was no tympanitis, or any particular distress on abdominal pressure.

Anxious to avail myself of those means which have severally proved efficient in my hands when an operation seemed imperatively demanded, I tried again the taxis, the warm bath, enemata, while we administered opium freely; then, placing the feet and pelvis upwards, and the head downwards, sought to make a more direct impression upon the hernia during the taxis, aided by the gravitation of all the abdominal viscera, but without success. With equal disappointment recourse was had to an expedient which sometimes has succeeded. It will be remembered that M. Brown-Séquard observed a more active vermicular or peristaltic movement of the intestines when the respiration was obstructed in an animal; endeavouring to make a practical application of this physiological fact in another attempt at reduction, bringing about, if possible, that play of the intestines by which hernia is relieved sometimes spontaneously, and to obtain, at the same time, as large an increase of abdominal capacity as relaxation of the diaphragm and abdominal muscles could afford, I made the patient, by forced expiration, expel all breathing air from the lungs, and then hold his breath as long as he could, while I manipulated the tumour. By this expiratory effort the diaphragm was driven upward as far as it could recede, and the temporary suspension of respiration, we may suppose, called the intestines into that active play which produced a kind of suction or traction upon the portion of the gut compromitted in the hernial sac; for we read even of dry cupping in the vicinity of the ring, having succeeded in accomplishing this end. Yet, as I have stated, even this most ingenious plan failed entirely.

Avoiding further interference, we placed the boy upon his back, with the pelvis very elevated, and his thighs flexed, advised irrigation of the tumour with sulphuric ether, and an occasional dose of opium during the night. The next morning we learned that vomiting still continued, and that he had *passed blood by the bowels* during the night. The enterocele was now increased in size, the scrotum discoloured, and there existed pain over the abdomen, tympanitis, and fever. These urgent symptoms compelled us to operate at 12 o'clock on the 31st.

At the appointed hour my friend and colleague, together with a private pupil, assisted me. Chloroform was administered, and I made an incision of two inches over the enterocele, as it was my design to obtain ample room, in the event of not being able to accomplish the operation without opening the sac.

We cannot, in these operations, always perform what we desire; and to those duly qualified to appreciate these difficulties, it may be stated, that neither the grooved director, the ordinary probe, nor even the nail, could be made to penetrate at any point beneath the circumferential border of the external ring. The condensation of all the textures about the parts: the fascia, connective tissue, and serous layer forming the neck of the sac, were so incorporated in the structural band, which, at this point, seemed to be the true source of stricture, that nothing but an ill-directed puncture with the bistoury could have released, while this would undoubtedly have endangered the intestine. We proceeded therefore to lay open each layer until the sac was exposed, and then, by slight tractions upon the sac, another more direct endeavour was made to reduce the hernia *en masse.* Soon satisfied that this was impossible, I was obliged to lay open the sac, which contained no fluid, but so large an amount of omentum, that I at first supposed the case to be one of epiplocele. The omentum was highly congested, almost black, and entangled a portion of intestine so completely that some care was necessary to disengage it, when it was discovered to be equally congested, though otherwise healthy. Carrying the probe-pointed herniary bistoury of Sir A. Cooper, within the ring, the stricture was gradually released by an incision, directed upwards to a limited extent. During the progress of the operation there was no hemorrhage of any importance, no vessel required to be ligated. The stricture being now removed, it was easy to effect reduction. At first we were disposed to ligate and cut away some of the omentum, but as this part presented no positive indication of gangrene, nor termination of the kind, I ventured to return the omentum with the rest of the hernia.

The operation having terminated successfully so far, I was willing, even in this particular kind of case, to resort to a method, which, for some years I have been perseveringly using to secure primary adhesion, and which I have termed "the *Catacleitic method*," since it consists in *locking up*, *enseaming*, and *operculating* the wound, excluding air, and bringing surfaces in absolute apposition at all points. I applied seven silver sutures close to each other, using no carbolic acid, or any other styptic to interfere with the healthy normal action between the bleeding surfaces, or edges of the wound; and here, as on many other occasions, I was not disappointed with the result.

This remark regarding *carbolic acid* requires comment at a time when the professional verdict respecting it would seem to bear attestation of a therapeutical value as great, as the demand for its use appears a requirement of fashion.

Our experience among the thousands of wounded in the hospitals of Richmond during the war, induces the belief that styptics, like alumnized iron, but especially the persulphate and perchloride of iron, interfered so far with the process of primary adhesion as to prevent, rather than promote, cicatrization; and I have no reason to believe otherwise of carbolic acid. While these agents undoubtedly control hemorrhage, and are indispensable where hemorrhagic oozings prove obstinate, their use in more or less concentrated solutions not only obstructs wounds too often with artificial coagula, but exerts upon the tissues an effect provocative of just such irritation or inflammatory movement in the part, as subsequently leads to suppuration. Wounds that have been swabbed out with styptics until their *tanned* or *mummified* surfaces hold in abeyance every physiological act of exhalation or absorption, may cease to bleed in their altered contexture, but in my experience they are not likely to heal by first intention, and they will not heal by *primary adhesion*. My impression is that carbolic acid will be found to impair the normal action that sometimes brings vessels almost to *inosculate* reciprocally, and reinstate, as it were, at once the capillary circulation of a part; and although this fortuitous condition may rarely take place, and primary adhesion is therefore seldom met with, yet, if our aim is to produce or imitate what occasionally is seen to occur, this will not be accomplished where surfaces are desiccated and corrugated by applications often used in a most concentrated and caustic like form; nor is this result more to be expected when flaps and wounds are permitted, as was often the case in the recent war, to be *glazed* by a layer of blood coagulated into a varnish investment upon their surfaces. An attenuated stratum of coagulated fibrin may not interfere with adhesion by first intention, but it renders improbable the occurrence of primary adhesion.

For the above reasons, under such circumstances as do not plainly suggest the healing of a wound by granulations, I wash away the *crassamentum* until the surfaces of the wound may be brought together in as natural contact as is practicable where breaches of continuity exist.

Returning to our subject: On the next day a remarkable progress in cicatrization was observed by all who examined the wound; the whole appearance of the incision was that of a wound nearly completely cicatrized; no exudation even of an ichorous discharge for several days; so far as the mere wound was concerned, it was healed on the third day, with the exception of a small point at the dependent part over the scrotum, which would have been closed had an additional stitch been introduced at the time. In this condition the wound should have remained in perfect repose, for at least fifteen days or more, for, as I have remarked in my paper on the catacleitic method published in the *Richmond Medical Journal* for August, 1867, the success of the method depends upon perfect apposition and repose of the parts, and the undisturbed state of the retentive means, sometimes even under the most untoward conditions, as when erysipelatous inflammation of the integument sets in. However, contrary to my usual habit, I removed the sutures on the fifth day to test the condition of the wound, and with the exception of a slight ichorous discharge, which produced a healthy scab, cicatrization was accomplished.

This was a satisfactory result of the catacleitic method, for in other operations on the scrotum, one in particular, where I removed a diseased testicle with hematocele of the cord, I have not found this plan so applicable as elsewhere, owing to the difficulty of maintaining all points of surface in perfect contact where there exists much serous cellular tissue in loose and pendent parts.

In this case of herniotomy, I cannot but refer so rapid a cure to the plan in question, since this mode of occluding the wound secures *primary adhesion* very often, and on this occasion insured at least healing by *first intention*, since there was some ichorous discharge. So complete an *enseaming* of the wound might expose the patient to an inevitable transit of the products of exudation and suppuration into the peritoneal cavity, but against this we must be guarded, since at some point in a dependent part a suture may be removed, and even then we shall find the conditions more favourable for ultimate repair; the sutures are metallic and cannot yield, will not cut out if properly applied, and continuing to hold the parts together, will at least diminish the area of surface for the modelling process.

Statistics have shown hitherto that cases of herniotomy recover more frequently, when the wound is left open to granulate, with a free exit for adventitious products. In this connection, therefore, this case may present some interest. The subsequent treatment consisted in pills of opium, which kept the bowels quiet, together with fluid drinks, beef-tea, and milk. The patient rested well during the afternoon; the surface heat diminished; the pulse kept its rhythm, and soon beat its normal time again. The next day there was no tympanitis; flatus escaped in large quantities, as we were voluntarily informed. On the surface of the body an exanthematous eruption in blotches or patches was discovered everywhere, which I attributed to the large doses of opium taken. The eruption gave rise to no constitutional disturbance. He remained easy, felt a desire for solid food, and passed urine regularly, without pain. The bowels were not moved until April 5th, when he had a natural action. The alvine dejections recurred every day regularly from this time.

This is the first time that I have applied this method to a case of herniotomy. So rapid a success invites me, with the proper precaution during the progress of cure, to attempt it again.

The necessity for a truss, so soon as the parts will bear compression, is clearly indicated and was exhibited on this occasion, as the hernia actually descended again in three weeks after the operation, though it was at once replaced. The parents neglected to follow injunctions in this respect. He now wears a well-adjusted truss, which, it is not unreasonable to hope, may soon obliterate a portion of the canal, so that it will assume a natural relation to the proper structures about the rings.

A Second Note on Priority in the Resort to Weight Extension in Fractured Thigh. By EDWARD HARTSHORNE, M. D.

DR. GEO. C. BLACKMAN (*Western Journal of Medicine*, May, 1869) presents the following note with a quotation from the *Chirurgical Obser-*

vations and Cases of William Bromfield, a well-known contemporary of Pott and surgeon to St. George's Hospital, in London, in order to correct an imaginary error he attributes to me in my comments on the mistake of Heister, then of Bell, and afterwards of others, in regard to the pulley extension adopted and recommended by Fabricius Hildanus as the method of Ambrose Paré :—

> "In the second volume of this valuable work, at page 111, we find the author extolling the advantages to be derived from the relaxation of the muscles in the reduction of fractures and their treatment. He then proceeds :—
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> "'Lately, indeed, I have heard that the practice is adopted by some surgeons of other hospitals in London ; nevertheless, this is of as little weight almost as my instructions were so long since, for even at this time, the advantages of this way are not sufficiently clear to some of the professors of surgery. As *short* splints and *stretched out* limbs are, by them, thought the best method of practice ; *and even a large weight hung from the ankle joint, to keep the muscles of the thigh extended,* when the femur is fractured, *is not everywhere exploded*' [p. 112].—(London, 1773).
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> "We have placed in italics sufficient, we think, to prove that Dr. Hartshorne is himself in error in his comments on the 'interesting effect of second-hand quotation and of erroneous compilation in the European history of weight extension,' and it is evident that for many years prior to the publication of Mr. Bromfield's work the practice which this surgeon condemns of hanging large weights from the ankle-joint in the treatment of fractures of the thigh, had been adopted by the British surgeons."

No one, who has carefully looked into the successive London editions of the great work of Heister, as the deservedly popular surgical text-book of those days, or who has seen the Nuremberg Professor's picture of the weight and read his description of the method of Hildanus, can learn anything from Bromfield's very brief allusion to what must have been familiar, not only to John Bell but to every well-informed surgeon of his time. "Heister's Surgery is in everybody's hands," said Samuel Sharpe in the preface to his *Critical Enquiry into the Present State of Surgery* (London, 4th ed. 1761), many years before the date of Bromfield's work. The wonder, then, is, not that the weight had been adopted, but that its employment was anywhere "exploded."

There is nothing to show that Bromfield's "large weight" was not the "extending power" represented by Heister, and erroneously copied by him from the work of the Bernese Professor (Hildanus) to which he refers as his authority. At all events, the sentence cited by Dr. Blackman does not contradict my assertion in a single particular ; nor does it add to our information, except, perhaps, in a vague allusion to the fact that the practice described and objected to by Heister was "not everywhere exploded." The German translation of Bromfield, published at Leipsic, in 1774, notes the first of these two sentences as intending to refer to Pott, whose publications, and that of Wm. Sharp, had anticipated the surgeon of St. George's in the doctrine (long before discussed by Galen and others) of "demiflexion ;" but the weight extension fling awakes no comment. Allowing that Bromfield made, so far as we know, the first mention of the practice after Heister, he certainly gave no "picture of the weight and its accessories," which was a material part of John Bell's performance—one in which he had not only "no idea of suggesting anything new," but really presented what "was, so far as the weight is concerned, the product of his own active and brilliant imagination."

"Have we not the jack-stone of Hildanus, which was hung to the heel, and the remora or post driven into the floor or table, which fixed the patient in his place, and prevented him slipping forward? Have we not the bed with surcingles and horse-girths for tying the patient?" (C. Bell's ed., vol. ii. p. 155.) Again, he says (*id.* p. 158), "we have drawings of the bed, the surcingle, or girth for the body, and the jack-stone of Hildanus for hanging to the heel," &c. &c.

In comparison to old Bromfield's feeble bark, the attack of Bell is the roar of a "rampant" lion. It is clear as daylight, both in speech and picture. Yet Hildanus neither pictured nor described a weight of any kind, and he expressly warns his readers against attaching his pulley extender to the heel. Bell faithfully copied the bed, the surcingle and the "*cingulum*" *for the thigh*, of Hildanus; but then bethought himself of the weight of Heister, or of older Continental writers, known of course to him and his contemporaries—and drew his "jack-stone" as a pendant to the *cingulum*. In his misreading of Hildanus under the lead of Heister, he is evidently followed by Syme and James; although all of them, doubtless, resorted to Hildanus for confirmation of the common error.

We must go further west, if not south, than the homes of Heister and Hildanus on the Continent, and back at least four centuries earlier than the days of Bromfield and Bell, and long before the times of Paré and Hildanus, as well as of Heister, in order to find a definite description of the weight extension (jack-stone excepted) arraigned by John Bell, and meant, perhaps, by Bromfield—to Guy de Chauliac, of Montpellier. This old annotator and master in surgery is referred to in the *Dict. de Méd. et de Chirurg. Prat.* (1832, vol. viii. p. 530), by L. J. Sanson, in his admirable paper on Fractures, for one mode of extension, in these words:—

> "3. Le poids que Guy de Chauliac et d'autres suspendaient à une corde attachée à la partie inférieure du membre, en passant ensuite par une poulie fixée au pied du lit."

Desault, in his earliest work on fractures (*Richerand's* ed. trans. by Caldwell, 1805), and Boyer, in his (*Bichat's* ed. Lond. trans. 1804, and Philad. ed. 1805), are still more explicit. They both speak of the "*plomb suspendue*," &c., described by Guy de Chauliac. (See, also, Boyer, *Traité des Malad. Chirurg.*, t. iii. p. 262.) More recently, Vidal (de Cassis) speaks of the "*poids en plomb*" as "just given as new" by Dr. "M. Antony" (of Augusta, Georgia) in the *South. Med. and Surg. Journ.* (*Gaz. Méd.*, 1837), although "*décrit*" by Guy de Chauliac. (*Traité de Path. Externe*, t. ii.) This is unfair to Prof. Antony, who warmly praises Daniell for the "evident improvement," but refers it to "a much older date." He reports one adult and three children as treated with encouraging success by means of short splints and weight, without a pulley or any counter-extension. (*Op. cit.*, Oct. 1836.)

Although I did not care to quote the passage indicated by these authors in my former communication, it may be as well to add it now, for the benefit of those who may have taken the trouble to follow us thus far.

The copy of the Seven Tracts of Guido de Cauliaco here quoted from is an excellent one published at Venice in July, 1513, some years after the death of the author and editor, who flourished in the previous century, and is said by Bayle and others to have compiled it, when an old man, in 1363, this date being given at the head of the first chapter of his *Cyrurgia*. In this "*Cyrurgia*" (Tract. v, Doctrina i, De Restauratione Fracturarum, cap. vii. p. 42), after describing the methods of many others, with his objections, he gives the one which he prefers, completing the account in these words, divested of their Gothic letter and abbreviations:—

> "Et ad pedem ligo pondus plumbi transeundo chordam super parvam polegeam; ita que tenebit tybiam in sua longitudine. Et si est aliquis defectus in equitatione trahendo paulatine rectificabit."

Bell cites other portions of Guy de Chauliac, and may have been aware of this, although he was not the man to leave his discovery unpublished if he had made it; nor was the still more erudite and no less practical old Heister less likely to notice such a passage. We cannot assume, either, that the more matter-of-fact London surgeon had gone no further back than Heister and the tradition of his own associates. Still, Bromfield gives not the slightest sign of personal familiarity, except through hearsay, with any writings on the subject of fractured thigh dressing, although he condescends to notice Mr. William Sharp as having been the first one, whom he had heard of, to follow his example in relaxing muscles in order to reduce fractures, and to apply the lesson in contriving a convenient apparatus for the purpose of properly securing fractured limbs in the relaxed position. And yet Percival Pott had preceded Bromfield in attracting general attention to the subject to such an extent as to have succeeded in attaching his name to a method claimed by the latter as one of his teaching for thirty years. Another illustration, this—when we regard the subsequent course of theory and practice, and remember the discussions of the older authors—of the revolving order of surgical creeds; as well as of John Bell's inventor's tribulations.

I trust enough has been said to show that Dr. Blackman's collation of one sentence of mine with one of Bromfield's affords no evidence of hasty compilation in what he is pleased to call an "elaborate" paper.

I am glad, however, to have the question ventilated, since it renders the history still more explicit. As one of the authors included in the bibliography of Dezeimeris (*Dict. de Méd. et Chirug.*, 2me ed., tome xiii. 507) and accessible in two different languages, I would have noticed Bromfield, and might have appended even his cursory dictum, as that of an authority of undoubtedly high standing, if my merely incidental note had been meant to be exhaustive. I should be glad now, also, simply as a matter of curiosity in an inquiry which does begin to be elaborate, to know of any other passages of equally authentic character. A still more extended exploration of all the works within my reach—including many Continental—has failed to develop any further trace of the subject, beyond mere repetition, whether during the Bell and Bromfield era, or between those of Heister and of Guy de Chauliac, or anything whatever of an earlier date, except in dislocations.

We may say, then, once more, that, considering the publicity given to "large weight" extension in the successive editions of Heister, so widely circulated even in America, as well as on both sides of the British channel; and considering the fulmination of John Bell, with his picture of the jack-stone, and the remarks of Desault and Boyer, the history we have sketched is remarkable enough in its illustration of the influence of authority and prejudice to deserve a passing record. For one, among many of my date, I am ashamed to confess that I worked through this whole question of fractured thigh extension thirty years ago; being then as familiar with the weight of Heister and the jack-stone of Bell as I am now; having seen the allusions of Desault, Boyer, and Sanson to Guy de Chauliac, but without having had the opportunity to examine either Guy de Chauliac or Hildanus, and long ago read the descriptions of Daniell, if not of L. A. Dugas and Milton Antony.[1] I studied the subject still more in practice than in books; and yet I never got far enough out of the routine of splints, and their *authorized* attachments, to make the trial of the weight, until I saw its admirable working in the hands of Dr. Buck, at the New York City Hospital.

If Dr. Blackman will take the time and trouble to follow the same course of inquiry—really *at first hand*, as I certainly did in the course of an investigation for another and more important purpose—I think he will agree with me in the conclusion that Heister mistook Hildanus, thus committing "erroneous compilation;" and that John Bell and others must have been misled into the same mistake through "second hand quotation."

Case of Carbuncle Successfully Treated with Pressure by means of Adhesive Strips. By S. R. KNIGHT, M. D., of Philadelphia.

Miss P., aged 32 years, had suffered for some time from boils, in consequence of which her strength had become much reduced. I was asked to see her on account of a carbuncle seated on the anterior part of the thigh, over the upper portion of the rectus femoris muscle. The carbuncle measured at least three inches in each diameter. I directed nutritious diet with ale and iron in the form of the muriated tincture, and at my third visit proposed to make the crucial incisions usually recommended in such cases. I requested Dr. Mustin to administer ether preparatory to the operation, but at the last moment, on his suggestion, concluded to try pressure with adhesive strips, which he had seen used with success in the wards of the Episcopal Hospital by Dr. John Ashhurst, Jr. The patient was delighted at the prospect of escaping the knife, and in two days after the application of adhesive strips, concentrically from the border inwards, the slough came away, and the ulcer which remained healed rapidly under simple dressing; the patient being entirely well in one week from the application of the first strip.

Antagonistic Action of Opium and Belladonna; Case in which Half a Drachm of Opium was Swallowed—One-fourth of a Grain of Atropia given Hypodermically; Recovery. By J. P. MCGEE, M. D., Trenton, Tennessee.

I was called May 3d to see George A., a stout, muscular man, near 40 years old, about half an hour after he had swallowed 30 grains of moist good opium, and drank 10 or 12 ounces of whiskey. He was perfectly rational, face flushed, quite excited, pulse accelerated, no signs of narcotism, refused *resolutely* to take anything until assistance was procured, and he was bound hand and foot, and gagged, when he consented to do as we wished him. It had now been an hour and a half since he took the poison, and it was with difficulty he could be kept awake.

Sulphate of zinc, mustard, tartar emetic, and lobelia were each given in large quantities, with copious draughts of tepid water. But, notwithstanding the continuance of these means, for an hour or two, *no vomiting* could be induced. (Had no stomach pump.) The use of atropia had been discussed, but deferred until he should vomit. But vomiting could not be induced and narcotism was so profound that cold douches on the naked chest and body would not arouse him; face livid; pupils contracted to a mere point; pulse about fifty or sixty. It was not deemed safe to wait longer, accordingly one-eighth of a grain of sulphate of atropia was administered hypodermically. After thirty or forty minutes, none of the belladonna effects presenting, I repeated the injection, using the same quantity as before. About half an hour afterward the pupils began to dilate and the pulse to increase in frequency, until within an hour after the last injection the pupils were dilated to their fullest extent; pulse 140; evidently no vision; could be aroused sufficiently to understand what was said to him, and *vomited freely.* No solid opium and but slight odour of opium observed in the ejecta. During all the time since deep narcotism had come on he had been walked (or rather dragged), douched, slapped with a cold towel, and "worried" generally to keep him awake. Some two hours or more after the atropia was introduced, narcotism again began to increase. This somewhat alarmed me, and I would have concluded, with Dr. Harley and others, that the combination of belladonna with opium increased the narcotic action, but that I observed the pupils were contracting and the pulse losing its frequency. In the course of an hour or two narcotism was quite profound, the pupils far below the normal size. It now began gradually to diminish until at $8\frac{1}{2}$ P. M., nine hours after swallowing the poison, his pulse was 85, pupils just a little dilated, and I left him, ordering that he be aroused at stated intervals, but be allowed to keep his bed.

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[1] For another British revival of the practice (in 1818), see note to an excellent paper, on "Surgical Cases," &c., in St. Bartholomew's Hospital Reports for 1867, by P. C. Delagarde.

4th, 8 A. M. Found him awake; pulse 85; pupils normal; nausea; headache; mind not quite clear; great muscular agitation or nervousness; shakes nearly all the water out of a glass when trying to drink. Bowels have acted this morning.

6th. Has steadily improved, and is now quite well. No scarlet rash, or any unpleasant action or effect of the belladonna was observed.

It is, I think, very clear, that recovery in this case is directly attributable to the action of the atropia. But the main point of interest (and my reason for reporting the case) is, the extraordinary amount administered; and some of your readers may, as most of my confrères here did at the time, condemn my course as rash and unjustifiable. I must, therefore, be allowed to say a few words in its defence. I was aware that the reciprocally antidotal action of opium and belladonna is denied by some able and distinguished observers; that Bouchardat and Brown-Séquard said, long since, "that death by opium takes place from the same dose, whether we use belladonna or not." That Dr. George Harley, in his Gulstonian Lectures (*Brit. Med. Journal*, April 11, 1868), endeavoured by the recital of numerous experiments upon the horse and dog, as well as a few on man, to prove, not only that "opium and belladonna have not the antagonistic action which has been attributed to them," but that when used in combination they mutually increase the narcotic action of each other; in proof of which he details four experiments on man. In the 1st he injected $\frac{1}{4}$ gr. of acetate of morphia in the arm. In the 2d he injected $\frac{1}{48}$ gr. of sulphate of atropia; in each instance the drug used producing its characteristic effect, except that the hypnotic effect of the morphia was incomplete.

In the 3d he injected $\frac{1}{4}$ gr. of morphia one hour after the injection of $\frac{1}{48}$ gr. atropia, with the effect, as he claims, of "prolonging the belladonna effects very considerably," at the same time "greatly increasing the narcotic effect of the opium."

In the 4th, the experiment is reversed, the morphia being administered first, but the same conclusions arrived at. I was by no means convinced, however, that Dr. H.'s opinion was correct. All four of the experiments brought forward were upon the *same person*, and may not the results obtained be accounted for on the ground of idiosyncrasy?

Dr. Henry S. Downs, of New York, read a paper before the State Medical Society in 1866, in which he details eleven cases, nine of opium poisoning, eight cured by belladonna. Two of poisoning by belladonna, cured by opium. True, in the opium cases, the exhibition of belladonna was premised in several by emetics, but in two or three "*no* emesis could be induced" by any means, and in them, recovery was as rapid and complete as in the others. In one of the cases, ʒj tr. belladonna was given, followed at intervals of twenty minutes by 2 grs. "best English ext." until 6 grs. were given, with complete recovery in eight hours. It is worthy of special notice too, that this case, notwithstanding the large quantity of the drug administered, was not, nor were *any* of them followed by any of the bad effects of belladonna.[1]

By these and numerous instances of its successful administration, with the fact that it is a direct cardiac stimulant, through its action on the great sympathetic, I was easily induced to resort to it. And my reasons for using such an extraordinary dose of atropia were these: The whiskey taken with the opium had insured its solution, and stimulated the stomach to absorb it rapidly and in large quantity, as proven by the profound narcotism, and the paralyzed condition of the stomach, it being unable to respond to any emetic given. He had taken 30 physiological doses of opium; not less than 15 had probably been absorbed. The dose of the antidote should, of course, be proportionate to the amount of poison already in the circulation. Could there be any risk, then, if belladonna is the antidote, in throwing into the circulation two-thirds as many doses as were probably contained of the poison? I thought not, and *one* of my medical friends sustained me. It was evident that the opium would speedily induce death unless its action was arrested. Was it not, then, not only justifiable but my *duty* to deal it a blow that *must* be felt?

The conclusions then to which I am brought are (in all due deference to the great names opposing), 1st. That opium and belladonna *do* antagonize each other to a degree which may be regarded as antidotal. And that the practitioner who does not administer the one, in case of poisoning by the other, *fails of his duty*.

2d. That success depends upon the prompt administration of a dose or amount adequate to the case in hand; and there can be no other rational guide to this, than the quantity of the poison taken and probably absorbed, as evinced by existing symptoms.

Description of a New Vaginal Speculum. By J. STOCKTON HOUGH, M. D., Resident Physician to the Philadelphia Hospital (Blockley).

While attending the lectures on obstetrics at the University of Pennsylvania, some eighteen months ago, several different kinds of specula were exhibited to the class, and the use and particular merits of each pointed out.

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[1] [In the No. of this Journal for October, 1862, will be found a report, by Dr. Wm. F. Norris, of two cases of opium poisoning successfully treated by belladonna, with a table containing notes of the previously published cases of poisoning by opium treated by belladonna, and of belladonna poisoning treated by opium. Dr. Harley, in his recent work, reviewed in this No. of Journal, gives similar tables, adding thereto the cases of the kind reported since 1862.—ED.]

It occurred to me, that neither they nor any other I had seen possessed all the qualities requisite to enable one to make a thorough and satisfactory uterine *and vaginal* examination, and Scanzoni observes, "We have experimented with instruments of the most diverse construction, and we are convinced that none of them now known completely answers the purpose."

None of them would put the vaginal walls on the stretch throughout their entire length, and allow any considerable portion to be seen at once. Sometimes it is almost impossible to see the os, on account of the equality in the length of the blades, or restricted expansibility, or both in metallic instruments. This is one of the great objections to all metallic instruments; there would be just as much propriety in having a glass speculum without the obliquity at the end, as in having a metallic instrument with blades of equal length. All who have used the glass speculum of Fergusson, know the value of this obliquity at the end, and must therefore be prepared to concede that such a modification of a metallic speculum is very desirable. The anatomy of the vagina teaches that the blades of a speculum should be of different lengths, and experience in the use of an instrument of this kind confirms it.

In the use of a bivalve instrument having blades of equal length, when the posterior blade is introduced as far as the posterior cul-de-sac, the anterior blade tends to antevert the uterus, and will often actually do it, and prevent the os uteri being seen.

I conceived the idea of making an instrument which should be expansible at the *base as well* as at the apex; which should be expansible at the apex only, at the base only, or both blades be capable of being expanded parallel. I have not only succeeded in this; but the range of expansibility, that is, the comparative expansibility of base and apex, is considerable. After it has been expanded at apex to the desired extent, it may be expanded also at base, or after it has been expanded parallel, it may be further expanded at apex alone. The blades are expanded parallel to any desired extent by simply moving the button along the arc. All of these changes are accomplished without going back to any original position.

The instrument is bivalve, made of speculum metal, and weighs about 9 ounces, ($\frac{3}{4}$ as heavy as the ordinary quadrivalve).

The upper blade is $5\frac{1}{4}$ inches long, and the lower blade is 6 inches long, making $\frac{3}{4}$ inch difference in the length of the blades when the instrument is closed, but when it is expanded to its full extent, the difference amounts to $1\frac{1}{2}$ inches, corresponding to the comparative lengths of the anterior and posterior walls of the vagina.

Fig. 1 shows the instrument closed, and ready for introduction.

Fig. 1.

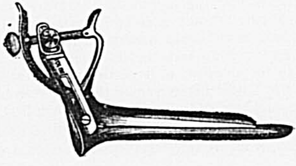


Fig. 2, the instrument with the apex partially expanded, which is accomplished by placing the index finger and thumb of the left hand in the depressions *A* and *B* merely to steady the instrument, while the lever *O* is rotated by seizing the button at its extremity, and turning from left to right. By carrying this button to different positions along the arc, the degree of expansion is determined.

Fig. 2.

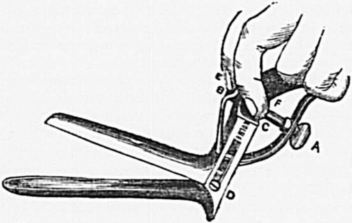
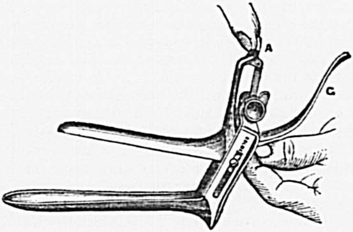


Fig. 3 represents the instrument with the blades expanded through their entire length.

Fig. 3.



To make examination of the uterus, the instrument is expanded antero-posteriorly, while to examine for fistula it is expanded laterally; to examine the vagina generally, it may be expanded in any way, and rotated.

To introduce the speculum, it should be held between the thumb and index finger of the right hand, so that the longer blade will rest alongside the thumb, and the end of the index finger be placed in the depression of the longer blade, then the apex is to be pressed down as it is introduced, and when the ends of both blades have passed the ostium vaginæ, the instrument is to be rotated a quarter of a circle, so that the shorter blade shall be applied to the anterior wall of the vagina, and then it is to be pushed on until the longer blade reaches the posterior cul de sac; then if it is wished to expand the blades at the apex alone, first, turn the button, *A*, Fig. 2, from left to right, until the nut on the screw has passed about one half its length, when it is *generally* desirable to expand the blades throughout their entire length, Fig. 3, which is done by drawing the button (*A*) out as far as possible, which will liberate it from the enlargement in the slot, and allow it to be moved to any other hole in the arc, into which it may be pressed as it passes over them.

It is self-retaining, and on account of its great range of expansibility the vaginal walls can never fall in along its sides, but will appear as tense smooth surfaces. The view afforded of the vaginal walls, by the aid of this instrument is most satisfactory.

In examinations of the cervix and os uteri it has exceeded my most sanguine expectations, the inequality of the blades being of greater value than I had at first anticipated.

The uterus projects into the vagina like a nipple on a breast, and allows you to see all around its attachment to the vagina. This instrument is especially adapted for the examination of venereal cases, as it puts the vagina on the stretch, along its entire length, and any ulceration which may have been concealed now becomes apparent. I have used it in just such a case, where all attempts to introduce other specula had failed, and the nature of the affection was not known, until this instrument was introduced, and expanded, when a large ulcer was discovered half way along the anterior wall of the vagina. I have used it in examining for fistula with entire satisfaction.

It is introduced with great *ease* and *without giving pain*, the shorter blade does not engage until the longer one has passed the ostium vaginæ. It does not pinch the walls of the vagina when it is withdrawn, as the edges of the blades have a peculiar shape, as shown in Fig. 3. The mechanism is above the pubes, which is preferable to being about the anus. It can be used with the patient lying on the side, or on the back, preferably the latter. It can be applied with one hand only if necessary, and *always without* exposure of the patient. It can be used in operations for fistula, and is self-retaining.

When the instrument is unexpanded, the periphery at the apex of the blades is equal to the circumference of a circle whose diameter is $\frac{3}{4}$ of an inch, and the periphery of the blades when fully expanded is equal to the circumference of a circle, whose diameter is 2 inches (6 inches). The instrument is made by Mr. Kolbé in a very excellent manner, and has received the warmest commendations from all who have seen it and tried it.

I am now using it constantly in the wards of this hospital, and find that it answers better than any other for any and all purposes. There is no class of cases in which a speculum is used, to which it is not entirely adapted, though there are some *particular operations*, to which others are better adapted, but they are specially designed for these operations, and nothing else. Some have spoken of this instrument as a modification of Cusco's speculum, but this is a mistake, and it arises from the fact that it has two valves, many specula have two valves, but in none of them are the valves alike, and no one would think of calling all bivalve instruments, *Cusco's*. We should be compelled to go far back in the history of surgical instruments to find who invented the first bivalve speculum, whoever did, I am quite willing to give *him* the credit of it.

Death from Chloroform. By THEODORE C. WALLACE, M. D., of Cambridge, N. Y.

Mrs. B., aged about 30, died suddenly May 10, 1869, from the effects of chloroform, at Cambridge, New York. The anæsthetic was administered by a surgeon dentist, for the purpose of extracting several teeth. She first inhaled the chloroform from an ordinary ounce vial until partially affected. The dentist then poured about four drachms upon a sponge, and administered it from that. She readily yielded to the medicine, when four or five teeth were extracted. She then recovered her senses perfectly, and experienced no unpleasant effects from its influence. It was again administered from the same sponge, to which no chloroform had been added. She soon was fully under its influence. Three teeth were now extracted. She again rallied perfectly. Three teeth more remained. The sponge was again applied; no chloroform had been poured on it since the first inhalation. She again succumbed to its influence; one tooth was extracted, and, whilst attempting to remove another, the muscular system became relaxed suddenly, and respiration ceased. Attempts were instantly made for her resuscitation, but with no effect. She was a very nervous person, and was very much excited when she first seated herself for the operation. The pulse was carefully watched until she became fully affected by the chloroform, and was not afterwards constantly watched. It is impossible to state positively in this case whether the pulse or respiration first ceased. The verdict of the coroner's jury (founded on the opinion of two physicians) was what I consider an absurd one, viz., "Death from asthenia of the heart, resulting from the administration of chloroform."

Remarkable Course of the Bullet in a Case of Gunshot Wound of the Abdomen. By ALBERT L. GIHON, M. D., Surgeon U. S. Navy, U. S. Hospital Ship "Idaho," Nagasaki, Japan.

At four o'clock of the afternoon of January 30, we were called in haste to the English steamship "United Service," which had just arrived, to see the pantry-boy, *Men Sing*, a Chinaman, about thirty years of age, with a gunshot wound of the abdomen, received thirty hours before while at sea, and occasioned by the accidental discharge of a Smith and Wesson's revolver. The pistol was kept in a closet near the pantry, and was found still in its place, hanging muzzle downward, the barrel being detached from the cylinder and turned partly back, as though the injured man had been investigating the mechanism of the spring which secures the barrel, when the charge was exploded. There being no surgeon on board the vessel, the patient had been placed in his bunk—in a dark, ill-ventilated apartment. Two doses of castor oil had been administered (the first of which only was retained), and wet dressings applied to the wound.

Dr. Kidder visited him at once, and found that the bullet had scored the palmar surface of the tip of the third finger of the right hand, and outer margin of the palm of the same, both wounds being scorched and blackened; and that half an inch below, and two inches to the right of the umbilicus, there was a penetrating wound directed obliquely downward towards the left groin. There was no orifice of exit, nor other injury. Apparently, the man had been holding the pistol by the barrel with his right hand, and trying to detach the cylinder with his left, the muzzle pointing inward towards his abdomen, when he raised the hammer and let it fall, thus discharging the load. The wound had closed, and nearly cicatrized, rendering it impossible to detect the track of the ball, which was not indicated by any line of tenderness, tumefaction, or discoloration. There was swelling and complaint of pain on pressure in the left groin, extending into the scrotum on that side, but not excessive. A most careful examination, which was repeated by myself about two hours later with the same result, failed to determine the site of the bullet; but a gurgling of mingled air and fluid, similar to that afforded by a congenital inguinal hernia, could be distinctly felt directly in the supposed track of the ball, along the upper part of the left spermatic cord. There was dorsal decubitus, but no sign whatever of peritonitis; the knees were not drawn up, and the thighs could be flexed and extended without occasioning pain. The tongue was moist and yellow; the pulse small, soft, and frequent. As the oil already administered had failed to operate, and the peristaltic motion induced thereby was quite painful, Dr. Kidder at once directed a simple enema, and ordered cold applications to the lower part of the abdomen. At seven o'clock the enema brought away two large fecal stools, free from blood, but containing a greater quantity of mucus than is usual. The patient was then given a full dose of opium, and left for the night—his mind clear, suffering no great pain; his pulse fuller and slower since his stools; his tongue moist, and surface cool.

He continued very much in this state, Dr. Kidder and myself visiting him daily until February 4, when the tumidity of the groin and left side of the scrotum had increased and become dark coloured and very sensitive under pressure, which produced a crackling, gurgling noise, confirming the suspicion of a hernia wounded by the ball. Under the impression that the ball must have lodged in this vicinity, I made a deep incision into the groin, and the following evening the distension of the scrotum was so great that I punctured it in numerous places, discharging a quantity of fetid gas. During all this time there was inconsiderable febrile reaction, the pulse continued soft though frequent, and the tongue moist; there was no vomiting or retching, or any tenderness or inflation of the abdomen, except in the left inguinal region. Occasional enemata were administered, producing fecal stools, which were never bloody. His urine was scanty and high-coloured, but voided regularly. Opium was administered in full doses; he was sustained by beef-tea and milk-punch, and cold dressings were kept applied to the groin and genitals.

The steamship having received orders to leave the port, it became necessary to remove the patient on shore, and he accordingly passed out of our hands into the Japanese government hospital at Nagasaki, under the superintendence of Dr. C. G. Van Mansvelt, who, in consultation with us on the 8th, at once suggested that a congenital hernia had been wounded, confirming our own view of the case, and continued the course of treatment, though increasing very much the frequency of the opiate administration, and substituting milk for beef essence and punch. The tumefaction was less than when we had last seen him two days before; but the scrotum and groin were much discoloured, and fecal discharges were taking place from the incision in the groin, and from one of the punctures in the scrotum.

On the 14th I received a note from Dr. Mansvelt, informing me of the death of the patient, and requesting Dr. Kidder and myself to assist at a post-mortem examination. The previous day Dr. M. had cut off several inches of sloughing intestine, which protruded from the bottom of the scrotum. On laying open what we supposed to have been the course of the ball, we were surprised to find no trace of it, and discovered, on further dissection, that it had passed transversely and somewhat superiorly across to the left hypochondrium, near the extremities of the floating ribs, where it was deflected down in a curvilinear direction towards the left groin, crossing, though much more deeply, the incision which I had made on the

4th inst., and losing itself in the general destruction of tissue in this region. Subsequently, after we had sawed out the anterior wall of the pelvis, with the bladder and genitals intact, we found that the bullet had crossed behind the symphysis to the right side, and was lodged behind and rather below the superior ramus of the pubis, where it was completely concealed from external observation, and where it had imbedded itself, without exciting the slightest irritation. As supposed, a congenital hernia of the left side had been wounded, and a large extent of small intestine destroyed by sloughing. The peritoneum was everywhere adherent, and numerous abscesses existed between its several folds. The liver was enlarged and softened, the gall-bladder enormously distended, and the mucous membrane of both large and small intestines deeply ulcerated. The patient was very much emaciated; he had been an inveterate opium smoker, and, like many of his race, had suffered from chronic diarrhœa.

NAGASAKI, JAPAN, March 23, 1869.

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Case of Extrophy of the Bladder, with other Malformations. By V. W. MAY, M. D., Lawrence, Kansas.

The subject of this malformation, Geo. S., living eight miles from this city, is aged 28. The tumour is as large as two fists, presenting the usual appearance of such cases. The orifices of the ureters are plainly visible. The penis is short, flattened, and imperforate; but a kind of gutter, or channel, is seen on its upper surface, formed by the approximation of the cavernous bodies; and at the posterior part of this canal are displayed the veru montanum, the mouths of the ejaculatory ducts, and the orifices of the prostatic canals. The scrotum is natural, and contains the testicles in a normal condition.

The venereal passions in this man are about normal, and the secretion and discharge of semen is easily excited by gentle friction over the deformed penis. We have reason to believe that masturbation is often practised in this way.

One striking peculiarity of this case is the entire absence of the umbilicus, no attachment whatever of the fœtal cord can be found.

With this misfortune our subject is perfectly deaf in the left ear; has *six* natural toes on each foot—the phalanges and metatarsal bones are all perfectly natural.

The man's parents are living and healthy; he is the second of a family of nine children, six boys and three girls; the rest of the children all normally formed, except the fifth, a boy, who had, when born, a "little toe hang to his little toe," which was clipped off with a pair of scissors. Subject's general health good; never had anything to ail him but ague.

DOMESTIC SUMMARY.

Popliteal Aneurism rapidly cured by Manipulation, Flexion, and Digital Compression.—Prof. GEO. C. BLACKMAN records (*The Western Journ. of Med.*, Jan. 1869) the following interesting case of this:—

E. B., American, æt. 25, admitted into the Samaritan Hospital Oct. 21, 1868, states that until two years before, he had always enjoyed good health. At that time he suffered from an attack of asthma, which, however, was soon relieved. Ten weeks before his admission, he first noticed the swelling, and he had pain